

March 2, 1993

GMP #18

MEMORANDUM

TO: District Directors
Environmental Health Managers
Environmental Health Supervisors
Office of Environmental Health Staff
Office of Water Programs

FROM: Donald J. Alexander, Director
Division of Onsite Sewage and Water Services

APPROVED BY: Robert W. Hicks, Director
Office of Environmental Health Services

Subject: Preliminary Approval of Sewage Discharge System

Based on recommendations of the Discharge Regulations Task Force, the following treatment systems have received **preliminary approval** under the Alternative Discharging Sewage Treatment Regulations for Single Family Dwellings. The approval becomes effective the date of this memorandum.

Systems designed to meet the General Permit limits of 30 mg/L for BOD₅ and total suspended solids - Intermittent, accessible sand filters, with or without recirculation, designed in accordance with the generic design requirements, and subsurface sand filters are given preliminary approval for discharge limits of 30 mg/L BOD₅ and total suspended solids. Generic design requirements will be revised to include intermittent and gravity, subsurface sand filters. Plans that do not utilize the generic design requirements must be designed by a professional engineer, must be formally submitted to the local health department for approval, and shall be designed in accordance with acceptable engineering practices. The intermittent, subsurface filter may also be designed by a P.E. in accordance with the design requirements set forth in the Draft Sewage Collection and Treatment Regulations.

Systems designed for effluent limits of 10 mg/L for BOD₅ and total suspended solids discharging to an intermittent stream (IS) or dry ditch (DD) at least 500' in length. These systems must be designed by a professional engineer (P.E.) licensed in Virginia, except for those exempted by § 2.27 B of the regulations. The following systems are given preliminary approval:

- A. 500 gallon tank (1/2 septic tank) installed as a surge tank/trash collector followed by an ATU that has received preliminary or general approval, followed by a sand filter at least 30 square feet in surface area (15 gpd/ft² for a three bedroom house with a design flow of 450 gpd). Other design requirements for this filter should comply with the generic design requirements. Other filters may be approved by the Office of Environmental Health Services after review by the Division of Onsite Sewage and Water Services or Water Programs.
- B. Recirculating sand filter constructed in accordance with the generic design requirements developed by the Division of Onsite Sewage and Water Services. (Under § 2.27 B of the regulations does require a P.E. submittal)

Systems designed for effluent limits of 10 mg/L BOD₅ and total suspended solids discharging to an IS or DD where the channel length is at least 250 feet, but less than 500 feet. These systems must be designed by a P.E.

- C. Either system from A or B above followed by a constructed wetland of 100 square feet (typical 3 bedroom house), 18" deep, with a length to width ratio of about 4:1. The wetland is to provide additional retention and natural disinfection to address concerns over disinfection and proximity to residences, etc. Chlorination and dechlorination would be required in the design, prior to the wetland. In actual operation dechlorination tablets may not be needed once the system became stabilized and well vegetated.
- D. NSF 40 ATU (or other ATU with preliminary or general approval) followed by a sand filter which has been designed in accordance with the generic design requirements or approved to meet 30/30 limits, followed by chlorine contact tank designed according to the regulations. These are the redundant units currently specified in the regulations for DD or IS where the channel is 250 to 499'.